

Application No. 09/711,691
Amendment Dated April 7, 2005
Reply to Office Action of February 23, 2005

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-63 (Cancelled)

Claim 64 (New) A method of displaying physiological patient data from a cyclic physiological waveform, the method comprising the steps of:

acquiring physiological patient data from a cyclic physiological waveform;

storing the physiological patient data in a memory array;

displaying the physiological patient data in a three-dimensional representation by parsing the physiological patient data into a series of waveforms such that each successive waveform is plotted in a temporal alignment to allow detection of long term trends in the physiological patient data;

colorizing the three-dimensional representation by

selecting a first data point along a current waveform in the series of waveforms, the selected first data point having a representative X coordinate, Y coordinate and Z coordinate,

identifying a first area between the current waveform and a second waveform in the series of waveforms based upon the coordinates of the selected first data point,

applying a first predetermined color to the identified first area based on the amplitude of the selected first data point.

Claim 65 (New) The method of claim 64, wherein the area is a triangle formed between the first data point along the current waveform, a second data point along the current waveform having a different X coordinate value than the first data point, and a third data point along the second waveform having the same X coordinate value as the second data point along the current waveform.

Application No. 09/711,691
Amendment Dated April 7, 2005
Reply to Office Action of February 23, 2005

Claim 66 (New) The method of claim 64, wherein the area is a triangle formed between the first data point along the current waveform, a second data point along the second waveform having a different X-coordinate value than the data point, and a third data point along the second waveform having the same X-coordinate value as the first data point along the current waveform.

Claim 67 (New) The method of claim 64 further comprising the step of selecting a second data point along the current waveform in the series of waveforms, the second data point having a representative X coordinate, Y coordinate and Z coordinate, identifying an area between the current waveform and the second waveform based upon the coordinates of the selected second data point, and applying a predetermined color to the area based on the amplitude of the selected second data point.

Claim 68 (New) The method of claim 64, wherein the predetermined color is applied based upon whether the amplitude of the selected first data point is within a predetermined range.

Claim 69 (New) The method of claim 68, wherein the predetermined range is +0.5mV to -0.5 mV.

Claim 70 (New) The method of claim 64, wherein each waveform is a median waveform, and wherein each median waveform represents a plurality of cycles of the cyclic physiological waveform.

Claim 71 (New) The method of claim 64, wherein the physiological patient data is electrocardiogram data.

Claim 72 (New) The method of claim 64, wherein the physiological patient data is blood pressure data.

Claim 73 (New) The method of claim 64, wherein the physiological patient data is cardiac output data.

Claim 74 (New) The method of claim 64, wherein the physiological patient data is pulse oximetry data.

Claim 75 (New) An apparatus for displaying physiological patient data from a cyclic physiological waveform, the apparatus comprising:

a display for displaying physiological patient data from a cyclic physiological waveform in a three-dimensional representation by parsing the physiological data into a series of waveforms such that each successive waveform is plotted in a temporal alignment to allow detection of long term trends in physiological data;

a processor capable of colorizing the three-dimensional representation by selecting a first data point along a current waveform in the series of waveforms, the selected first data point having a representative X coordinate, Y coordinate and Z coordinate,

identifying an area between the current waveform and a second waveform in the series of waveforms based upon the coordinates of the selected first data point, and

applying a predetermined color to the area based on the amplitude of the selected first data point.

Claim 76 (New) The apparatus of claim 75, further comprising a patient monitoring device providing the physiological patient data.

Claim 77 (New) The apparatus of claim 76, wherein the patient monitoring device comprises a transducer for acquiring the physiological patient data from a patient.

Application No. 09/711,691
Amendment Dated April 7, 2005
Reply to Office Action of February 23, 2005

Claim 78 (New) The apparatus of claim 76, wherein the patient monitoring device is a Holter monitor.

Claim 79 (New) The apparatus of claim 76, wherein the patient monitoring device is a stress-testing monitor.

Claim 80 (New) The apparatus of claim 75, further comprising a memory device connected to the processor.

Claim 81 (New) The apparatus of claim 80, wherein the physiological patient data is stored in a memory array.

Claim 82 (New) The apparatus of claim 75, wherein the display is a black and white display capable of displaying shades of gray in between black and white.

Claim 83 (New) The apparatus of claim 75, wherein the display is a red-blue-green color display.

Claim 84 (New) The apparatus of claim 75, wherein the processor further comprises software for animation and walk through of three-dimensional representations.

Claim 85 (New) The apparatus of claim 75, wherein the processor further comprises software to receive the physiological data.

Claim 86 (New) The apparatus of claim 75, wherein the processor further comprises software to parse the physiological patient data.